

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of: Olof NORRLOW et al.

Appl. No.:

Group:

Filed:

January 28, 2002

Examiner:

For: METHOD FOR THE PREPARATION OF SODIUM
PERCARBONATE GRANULES HAVING ENHANCED STABILITY

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

January 28, 2002

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE ABSTRACT OF THE DISCLOSURE:

Please replace the Abstract of the Disclosure with the rewritten Abstract of the Disclosure attached on a separate sheet attached hereto.

IN THE CLAIMS:

Please amend the claims as follows:

--5. (amended) A method according to claim 1, **characterized** in that the content of carbon dioxide in the aqueous solution to be sprayed is at least 0.25% by weight.--

--6. (amended) A method according to claim 1, **characterized** in that the surface of the sodium percarbonate granules is exposed to said spray for a period of from 0.5 to 15 minutes.--

--7. (amended) A method according to claim 1, **characterized** in that the thickness of said film is less than 100 nm.--

--8. (amended) A method according to claim 1, **characterized** in that the method additionally comprises repeating steps a) to c) from one to ten times to increase the thickness of the film by creating multiple layers.--

--9. (amended) A method according to claim 1, **characterized** in that the method is carried out in a fluidized bed reactor comprising a step of spraying said aqueous solution containing dissolved carbon dioxide inside the fluidized bed from a spray nozzle inside the fluidized bed reactor.--

--10. (amended) A method according to claim 1, **characterized** in that the method additionally comprises depositing an additional coating layer on top of said film of sodium bicarbonate, said additional coating layer comprising sodium sulphate, soda, sodium bicarbonate, a mixture of sodium sulphate and lithium sulphate, a mixture of soda and sodium

sulphate, a mixture of a metal sulphate and a polymer or a polymer.--

--11. (amended) Sodium percarbonate granules prepared according to the method of claim 1.--

REMARKS

Claims 1-12 are pending in the present application.

Entry of the above amendments is earnestly solicited.
An early and favorable first action on the merits is earnestly requested.


Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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BC/ia
Attachments

VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE ABSTRACT OF THE DISCLOSURE:

The Abstract of the Disclosure has been amended as follows:

Abstract of the Disclosure

~~The invention relates to a~~ A method for the preparation of sodium percarbonate granules having enhanced stability, comprising modifying the surface of the sodium percarbonate granules ~~by means of~~ a surface reaction between sodium percarbonate and carbon dioxide or bicarbonate species to form a dense solid film of essentially sodium bicarbonate on the surface of the sodium percarbonate granules, ~~said~~ the method comprising the steps of:

- a) dissolving carbon dioxide in water to form an aqueous solution containing dissolved carbon dioxide and bicarbonate,
- b) exposing the surface of the sodium percarbonate granules to a spray of ~~said~~ the aqueous solution containing dissolved carbon dioxide and bicarbonate, to form ~~said~~ the solid film of essentially sodium bicarbonate, and subsequently
- c) removing the residual fluid from the surface.

IN THE CLAIMS:

The claims have been amended as follows:

5. (amended) A method according to ~~any of claims 1 to 4~~, claim 1, **characterized** in that the content of carbon dioxide in the aqueous solution to be sprayed is at least 0.25% by weight.

6. (amended) A method according to ~~any of claims 1 to 5~~, claim 1, **characterized** in that the surface of the sodium percarbonate granules is exposed to said spray for a period of from 0.5 to 15 minutes.

7. (amended) A method according to ~~any of claims 1 to 6~~, claim 1, **characterized** in that the thickness of said film is less than 100 nm.

8. (amended) A method according to ~~any of claims 1 to 7~~, claim 1, **characterized** in that the method additionally comprises repeating steps a) to c) from one to ten times to increase the thickness of the film by creating multiple layers.

9. (amended) A method according to ~~any of claims 1 to 8~~, claim 1, **characterized** in that the method is carried out in a fluidized bed reactor comprising a step of spraying said aqueous solution containing dissolved carbon dioxide inside the fluidized bed from a spray nozzle inside the fluidized bed reactor.

10. (amended) A method according to ~~any of claims 1 to 9~~, claim 1, **characterized** in that the method additionally comprises depositing an additional coating layer on top of said film of sodium bicarbonate, said additional coating layer

comprising sodium sulphate, soda, sodium bicarbonate, a mixture of sodium sulphate and lithium sulphate, a mixture of soda and sodium sulphate, a mixture of a metal sulphate and a polymer or a polymer.

11. (amended) Sodium percarbonate granules prepared according to the method of ~~any of claims 1 to 10.~~claim 1.